IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Attorney Docket No. 006401.00417)

In re U.S. Patent Application of Wang et al.	)	
Application No.: 10/687,471	)	
	)	Group Art Unit: 1791
Filed: October 15, 2003	)	
	)	Examiner: Monica A. Huson
For: COLD WATER SOLUBLE EXTRUDED STARCH PRODUCT	)	Confirmation No. 8885

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

This constitutes applicants' brief on appeal. The information specified by 37 C.F.R. 41.37 (c)(1) is provided hereunder.

Real Party In Interest

The real party in interest in this application is Grain Processing Corporation of Muscatine, Iowa, the assignee.

Related Appeals and Interference

In the parent application, 09/863,928, an appeal was filed and assigned Appeal No. 2008-4344. A favorable decision on appeal was granted March 2, 2009. Appellants respectfully submit that the issues decided on this appeal are dispositive of those raised in this appeal. Application 10/687,498 is another application claiming the benefit of the parent application's filing date. An appeal is pending in that application, and the appeal has been assigned Appeal No. 2009-3246.

Status of Claims

The pending claims include claims 1-7. The sole independent claim is claim 1. All claims are rejected and all are appealed.

Status of Amendments

A response (captioned an "amendment") was filed after the final rejection, but no claim amendments were made subsequent to the final rejection.

Summary of Claimed Subject Matter

Claims 1, and those claims that depend therefrom, are directed towards a cold-water soluble extruded starch product. The starch product so prepared is substantially completely soluble in water at 25°C. Additionally, the extruded starch product is film-forming in aqueous solution.

The claims are presented in product-by-process form. As specified in claim 1, the process comprises extruding the starch in an extruder. The extruder has a barrel, a die, and at least one rotating shaft. The barrel has at least first and second zones, the first zone being upstream from the second zone. As specified in claim 1, the conditions of the first zone are insufficient to gelatinize the starch to the requisite gelatinization level, but the conditions in the second zone are sufficient to gelatinize the starch to the gelatinization level.

Claim 1 is reproduced below, with reference to at least one portion of the specification that provides support. Claim 4, argued separately, also is reproduced below:

1. An extruded starch product prepared by a process comprising:

providing a hydroxyalkyl starch **[see, e.g., p. 7 ln. 9]**, said starch being derivatized with a hydroxyalkyl substituent having from 2 to 6 carbon atoms **[see, e.g., p. 4 ln. 24]**,; and

extruding said starch in an extruder, said extruder having a barrel, a die, and at least one rotating shaft, said barrel having at least first and second zones, said first zone being upstream from said second zone, the temperature in said first zone being insufficient to gelatinize said

starch and the temperature in said second zone being sufficient to gelatinize said starch **[see, e.g., p. 5 ln. 18]**,, said starch being extruded in the presence of total moisture in said barrel no greater than about 25% by weight of said starch **[see, e.g., p. 3 ln. 12-13]**, said process including the step of controlling the rotational speed of said shaft to impart a specific mechanical energy to said starch sufficient to result in a soluble extruded starch product that is capable of extrusion through said die at said rotational speed **[see, e.g., p. 5 ln. 27]**, said starch being substantially completely soluble in water at 25°C **[see, e.g., p. 6 ll. 22-24]** and being film-forming in aqueous solution **[see, e.g., p. 8 ln. 17]**.

4. A starch according to claim 1, said starch being a granular starch having a particle size distribution such that at least 90% by weight of the starch particles pass through a 180 micron screen prior to extrusion **[see, e.g., p. 4 ln. 21]**;.

Grounds of Rejection to be Reviewed on Appeal

The final Office Action contains one ground of rejection.

Ground 1: Claims 1-7 are rejected under 35 U.S.C. §103(a) over Nakatsuka et al., U.S. patent 4,076,846, in view of Redding, Jr., U.S. patent 5,455,342, and further in view of Altieri, U.S. patent 5,849,233.

Argument

Ground 1:

The Board's decision in Appeal No. 2008-4344 is dispositive of the issues on appeal. The same references – Nakatsuka, Redding, Jr., and Altieri – were at issue. In that application, the claims were directed towards a process for preparing a starch, including a step wherein the starch is gelatinized. The Examiner had rejected those claims over the Nakatsuka reference, asserting that Nakatsuka disclosed a gelatinized starch. The Board disagreed:

> We agree with Appellants that the Examiner has offered no reasoning, nor pointed to any evidence of record, indicating that

> the starch-protein composition of Nakatsuka's Example 1 undergoes gelatinization.

Decision at 8. Similarly, the Board disagreed with the Examiner's finding that Nakatsuka disclosed multiple zones in the extruder:

> The Examiner offers no evidence in support of the finding that "gelatinization occurs about 150C-175C." (Ans. 3.) Nor does the Examiner offer any evidence in support of the finding that "it is known that gelatinization temperatures of starches such as are used in Nakatsuka range from 150C-175C and the gelatinization temperatures of starches in general range from about 70C-200C." (Ans. 9.) Moreover, it is unclear what starches the Examiner is referring to as "starches such as are used in Nakatsuka."

Id.

These facts were explained to the Examiner in the response to the final Office Action. In response, in the Advisory Action, the Examiner made general assertions about product-by-process claims and the requirements for patentability of such claims.

The claims herein specify a gelatinized starch ("the temperature in said second zone being sufficient to gelatinize said starch"). The Board has held that "We agree with Appellants that the Examiner has offered no reasoning . . . indicating that the starch-protein composition of Nakatsuka's Example 1 undergoes gelatinization." In light of this holding, the rejection here must be reversed. Moreover, at least the secondary reference Redding, Jr., cannot fairly be combined with the Nakatsuka reference, and the rejection requires reversal for this additional reason.

The claims specify the following elements:

- A starch is extruded to form a **starch product**.
- The starch product is substantially completely **soluble** at 25° C.

- The starch is (or has been) extruded in an extruder with **two zones**. The conditions in the first zone are insufficient to gelatinize the starch, but the conditions in the second zone are **sufficient to gelatinize** the starch.

The Examiner asserts, erroneously, that the gelatinized starch product may be found in Nakatsuka. As the Board has already held, the Examiner is wrong.

Nakatsuka is deficient

First, and perhaps most fundamentally on the pending claims, Nakatsuka cannot be relied on for any teaching of a starch product resulting from extrusion. Nakatsuka is directed towards the preparation of a complex of starch with protein. This complex, according to Nakatsuka, "is not a simple mixture," but rather, "it seems that some degree of union has been established between both materials by chemical reaction, thus contributing to the improvement in physical properties." Col. 6, lines 34-40. Nakatsuka does not specify the nature of this product. Is it a starch? Is it a protein? Does the resulting material have any polymeric carbohydrate structure? Nakatsuka does not say, and this detail is unclear. Given this deficiency in the disclosure, it is not proper to rely on Nakatsuka to disclose a starch product. Accordingly, the rejection fails on this ground alone.

Second, the claims of the present application specify that the extruded starch product is substantially soluble in water at 25°C. This limitation likewise is not found with certainty in Nakatsuka. Nakatsuka states generally that his product has some water solubility, but does not teach solubility in water at 25° C. The Examiner earlier pointed to Table 2, but the claimed solubility is not seen in this Table. Table 2 does contain some solubility data, but the meaning of this data is not clear. The Examiner has chosen to construe this data as a listing of number of seconds required for the starch-protein complex to dissolve at the specified temperature ranges. Even if it were accurate to so construe this data (and this is far from certain, given the paucity of Natatsuka's disclosure), the extent of dissolution is unclear. In the same column, at line 53, Nakatsuka describes an embodiment in which the product was said to *swell*, not dissolve. Additionally, at column 10, lines 37-56, Nakatsuka teaches that a "protein coagulant" may be added to vary the degree of solubility. This passage indicates by implication that the product is not completely soluble under some circumstances. Again, although Nakatsuka provides some disclosure, the reference lacks the requisite certainty to support a Section 103 rejection.

Another defect in Nakatsuka is that Nakatsuka fails to teach extruding the starch in an extruder having two zones, the conditions in the first zone being insufficient to gelatinize the starch to the specified gelatinization level, but the conditions of the second zone being sufficient to gelatinize starch to this gelatinization level. The Examiner earlier pointed to column 9, lines 9-17, 31-33, and 49-53; col. 13, lines 31-40, and col. 14, lines 5-12 and 25-28. Among these teachings, the only teaching of what might be deemed to be multiple zones is at col. 13, lines 31-40, where, in an injection molding machine, the following conditions are specified:

> Temperature inside the barrel; the 30°C to 50°C (water cooling) at the part below the hopper 120°C to 160°C at middle part, 160°C to 200°C at front part.

To form the rejection, the Examiner asserts (at page 3 of the Office Action) that "it is noted that gelatinization occurs about 150°C to 175°C."

The Examiner is incorrect on multiple grounds. First, because the nature of the Nakatsuka material is unclear, it is uncertain whether this material even has a gelatinization temperature, or is capable of gelatinization. Second, even if the material of Nakatsuka could be deemed a "starch," how does the Examiner know what the gelatinization temperature of this starch would be? The Examiner does not say. Third, if gelatinization occurs at "about 150°C" as asserted by the Examiner, presumably gelatinization would occur at **both** the "middle part" and the "front part," because a temperature of 160° C – above the Examiner's asserted gelatinization temperature – may be present in either "part." Nakatsuka's failure to meet this claim limitation is yet another, independent ground that requires reversal.

Nakatsuka is the sole reference relied on for the above-noted features of the claimed invention. Given that Nakatsuka fails to teach these features, the rejection should be withdrawn for the foregoing reasons alone.

The references are improperly combined

Even if the Board were to overlook all of the foregoing, however, the rejection still must be reversed. The Examiner has relied on a combination of Nakatsuka with Altieri and Redding, Jr., and this combination is improper as applied to the pending claims.

The Examiner is choosing favorable language while ignoring the contrary teachings of this reference. In asserting that the Nakatsuka and Redding, Jr. references are combinable, the Examiner has stated that "Redding, Jr. and Nakatsuka are combinable because they are concerned with a similar technical field, namely, methods of molded starches." Only in hindsight could this conclusion be reached. Nakatsuka is concerned with a starch that is heavily modified in a starch-protein complex, perhaps to the extent of the loss of the starch structure. Redding, on the other hand, teaches that chemical starch modification is undesirable. See col. 2. line 39 *et seq*. Redding, Jr. states as an object of his invention "to provide a cost effective and an energy efficient method of physical modification of starch and other substrates ***without the necessity of chemical additives*** required by prior art processes" (emphasis added). According to the subject matter purportedly taught by this patent, instead of making chemical modifications to the starch, the starch should be subjected to an abrupt pressure change by using a piston-type apparatus.

In summary, to arrive at the section 103 of claim 1, the Examiner has disregarded the teachings in Nakatsuka as to the nature of the extruded product. She has mistakenly pointed to passages in Nakatsuka that pertain to the starting material, not the extruded product. The Examiner has further ignored the fact that Nakatsuka fails to teach the solubility data specified in the claims. Additionally, she has ignored the fact that Nakatsuka fails to teach the extrusion conditions specified in the claims. The Examiner then relies upon Redding, Jr., which teaches – directly in contrast to the teachings of Nakatsuka – that that chemical modification of starch should be avoided. The Examiner's line of reasoning is wholly improper. She relies on a misconstruction of the Nakatsuka reference, and on a hindsight reconstruction of the invention from disparate, incompatible references that she has cobbled together. The rejection of all claims must be reversed.

[Argument applied to claim 4]

For the moisture content limitation of the claims, the Examiner acknowledges that "Nakatsuka does not specifically show barrel moisture level." (Final Office Action, page 3). For this, the Examiner relies on the Altieri reference. But the Examiner is reading Altieri in a vacuum, and is ignoring other parts of the claimed invention, specifically, the particle size limitation of the claims. As stated above, the claims specify that the starch that is provided to the

extruder is a granular starch that has a particle size distribution such that at least 90% by weight of the starch particles pass through a 180 microns screen. Altieri teaches that, in his process, it is necessary to use starch "chunks" that are of a significantly larger particle size. See, col. 2, lines 23-40 and Examples 1 and 2. In Altieri's Example 1, it is revealed that the starch "chunks" are sized such that over 70% are retained on an 80 mesh screen (80 mesh corresponds to 180 microns). See col. 6, line 5. In Example 2, a comparative example, a starch having a smaller size was employed, and, in Example 3, this starch is reported as being unsatisfactory (the extrusion is indicated as being "unstable.")

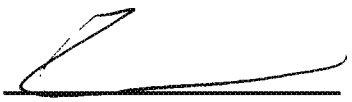
Given these contrary teachings, Altieri is not useful in connection with a section 103 rejection. The Examiner is completely ignoring these contrary teachings, and, to make the rejection, she has reach into this reference for support for one claim limitation while ignoring the overall teachings of the reference. This is classic hindsight reasoning, and must be reversed. Claim 4 is thus patentable for reasons over and beyond the patentability of claim 1.

Conclusion

For these reasons, the rejections entered in the Final Rejection cannot stand. Reversal of the claim rejections is respectfully solicited.

Respectfully submitted,

Date: May 18, 2009

By: 

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Claims Appendix

1. An extruded starch product prepared by a process comprising:

providing a hydroxyalkyl starch, said starch being derivatized with a hydroxyalkyl substituent having from 2 to 6 carbon atoms; and

extruding said starch in an extruder, said extruder having a barrel, a die, and at least one rotating shaft, said barrel having at least first and second zones, said first zone being upstream from said second zone, the temperature in said first zone being insufficient to gelatinize said starch and the temperature in said second zone being sufficient to gelatinize said starch, said starch being extruded in the presence of total moisture in said barrel no greater than about 25% by weight of said starch, said process including the step of controlling the rotational speed of said shaft to impart a specific mechanical energy to said starch sufficient to result in a soluble extruded starch product that is capable of extrusion through said die at said rotational speed, said starch being substantially completely soluble in water at 25°C and being film-forming in aqueous solution.

2. A starch according to claim 1, said starch having a moisture content below about 15%.

3. A starch according to claim 1, said starch having a moisture content ranging from about 9% to about 12%.

4. A starch according to claim 1, said starch being a granular starch having a particle size distribution such that at least 90% by weight of the starch particles pass through a 180 micron screen prior to extrusion.

5. A starch according to claim 1, said starch being film-forming in aqueous solution and being gelatinized to a gelatinization level, said gelatinization level being at least 95%.

6. A starch product according to claim 1, said starch product being dried to a moisture content between about 9% and 12%.

7. A starch product according to claim 1, said starch product being a ground starch product.

Evidence Appendix

None.

Related Proceedings Appendix

A copy of the decision on appeal in Appeal No. 2008-4344 is enclosed.

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LIN WANG, PETE MILLER,
JEFF UNDERWOOD, TONYA ARMSTRONG,
MICHAEL KRAMER, SUSAN FREERS,
ROGER MCPHERSON, E. DANIELD HUBBARD
and TERRY ANDREN

Appeal 2008-4344
Application 09/863,928
Technology Center 1700

Decided:[1] February 27, 2009

Before CAROL A. SPIEGEL, CATHERINE Q. TIMM, and ROMULO H. DELMENDO, *Administrative Patent Judges*.

TIMM, *Administrative Patent Judge*.

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[1] The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the Decided Date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

DECISION ON APPEAL

I. STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1-7 and 33-43. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

The invention relates to a process of preparing an extruded starch product and a process of preparing a coated food product. Claims 1 and 33 are illustrative:

1. A process for preparing a cold-water soluble extruded starch product that has a solubility greater than 90% in water at 25° C that is film-forming in aqueous solution and that is gelatinized to a gelatinization level, said gelatinization level being at least 95%, the process comprising:

providing a hydroxyalkyl starch, said starch being derivatized with a hydroxyalkyl substituent having from 2 to 6 carbon atoms, said starch being a granular starch having a particle size distribution such that at least 90% by weight of the starch particles pass through a 180 micron screen; and

extruding said starch in an extruder, said extruder having a barrel, a die, and at least one rotating shaft, said barrel having at least first and second zones, said first zone being upstream from said second zone, the conditions in said first zone being insufficient to gelatinize said starch to said gelatinization level and the conditions in said second zone being sufficient to gelatinize said starch to said gelatinization level, said starch being extruded in the presence of total moisture in said barrel no greater than about 25% by weight of said starch, said process including the step of controlling the rotational speed of said shaft to impart a specific mechanical energy to said starch sufficient to result in a soluble extruded starch product that is capable of extrusion through said die at said rotational speed.

33. A process for preparing a coated food product, comprising:

providing a food substrate;
providing a seasoning adherence solution; and

applying said seasoning adherence solution to said food product in a manner effective to cause seasoning in said solution to adhere to said food substrate; said seasoning adherence solution having been prepared by mixing water, an extruded starch product, and a seasoning to form said solution, said product having been formed by a process comprising:

providing a hydroxyalkyl starch, said starch being derivatized with a hydroxyalkyl substituent having from 2 to 5 carbon atoms, said starch being a granular starch having a particle size distribution such that at least 90% by weight of the starch particles pass through a 180 micron screen; and

extruding said starch in an extruder, said extruder having a barrel, a die, and at least one rotating shaft, said barrel having at least first and second zones, said first zone being upstream from said second zone, the conditions in said first zone being insufficient to gelatinize said starch to a gelatinization level of 95% and the conditions in said second zone being sufficient to gelatinize said starch to a gelatinization level of 95%, said starch being extruded in the presence of total moisture in said barrel no greater than about 25% by weight of said starch, said process including the step of controlling the rotational speed of said shaft to impart a specific mechanical energy to said starch sufficient to result in a soluble an extruded starch product that has a solubility greater than 90% in water at 25° C and that is capable of extrusion through said die at said rotational speed.

Appellants request review of the Examiner's rejections maintained under 35 U.S.C. § 103(a), namely:

(1) the rejection of claims 1-6 and 33-43 as unpatentable over Nakatsuka (US 4,076,846, issued Feb. 28, 1978 to Nakatsuka et al.) in view of Redding (US 5,455,342, issued Oct. 3, 1995 to Redding, Jr.), and further in view of Altieri (US 5,849,233, issued Dec. 15, 1998 to Altieri et al.); and

(2) the rejection of claim 7 over the above references and further in view of Protzman (US 3,137,592, issued Jun. 16, 1964 to Protzman et al.).

II. DISPOSTIVE ISSUE

The dispositive issue on appeal is: have Appellants shown that the Examiner reversibly erred in finding that Nakatsuka teaches or suggests a process of preparing a cold-water extruded starch product including providing a hydroxyalkyl starch and extruding said starch such that the conditions in a first zone of the extruder are insufficient to gelatinize said starch to a gelatinization level of at least 95% and the conditions in a second downstream zone are sufficient to gelatinize said starch to said gelatinization level?

We answer this question in the affirmative.

III. PRINCIPLES OF LAW

The examiner bears the initial burden of presenting a prima facie case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). In order to establish a prima facie case of obviousness, the examiner must show that each and every limitation of the claim is described or suggested by the prior art or would have been obvious based on the knowledge of those of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988). "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988, (Fed. Cir. 1996) (*quoted with approval in KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007)).

In general, a limitation is inherent if it is the "natural result flowing from" the explicit disclosure of the prior art. *Schering Corp. v. Geneva Pharms., Inc.*, 339 F.3d 1373, 1379 (Fed. Cir. 2003). Where the examiner has reason to believe that a claimed property may, in fact, be an inherent characteristic of the prior art product, an examiner possesses the authority to require applicant to prove that the subject matter shown to be in the prior art does not in fact possess the property. *In re Best*, 562 F.2d 1252, 1254-55 (CCPA 1977). However, before applicant can be put to this burdensome task, the examiner must provide enough evidence or scientific reasoning to establish that the examiner's belief that the property is inherent is a reasonable belief. *Ex parte Levy*, 17 USPQ2d 1461, 1464-65 (BPAI 1990); *Ex parte Skinner*, 2 USPQ2d 1788, 1789 (BPAI 1986).

IV. FINDINGS OF FACT

With regard to the extrusion step, the rejection: (1) reproduces the language of the extruding step verbatim from claim 1; (2) cites column 8, lines 9-17, 31-33, 49-53; column 13, lines 31-40; column 14, lines 5-12, 25-28 in support of a finding that Nakatsuka teaches this step; and (3) notes that "gelatinization occurs about 150C-175C." (Ans. 3.).

In responding to Appellants' arguments, the Examiner finds that Nakatsuka "clearly shows an extruder having varying temperature zones" citing column 13, lines 33-37, and "[a]lthough the specific gelatinization temperature for Nakatsuka's particular starch material is not known, it is known that gelatinization temperatures of starches such as are used in Nakatsuka range from 150C-175C and that gelatinization temperatures of starches in general range from about 70C-200C." The Examiner maintains

that Nakatsuka's extruder contains a first zone that does not allow gelatinization (30C-50C), wherein a second zone allows gelatinization (120C-200C) (Ans. 9).

Appellants contend that because the material processed in Nakatsuka is a complex of starch with protein, "it is uncertain whether this material even has a gelatinization temperature, or is capable of gelatinization." (Br. 6-7.). Appellants also contend the Examiner's determination that the zone conditions inherently meet the claimed gelatinization requirements lacks evidentiary support (Br. 7; Reply Br. 3).

Nakatsuka forms a water-soluble molding composition comprising starch material, an inorganic salt of a protein material, plasticizer, and lubricant (col. 3, ll. 64-68). The starch and protein-based materials may chemically react to some degree (col. 6, ll. 34-47).

Column 13, lines 33-37, discloses a step of molding that occurs after a step of milling a composition containing high-amylose cornstarch (starch component), sodium caseinate (protein component), and glycerol (plasticizer component) (Nakatsuka, col. 12, ll. 11-35). Milling occurs at a surface temperature of 120 °C (col. 12, ll. 20-21). The milled composition is introduced into the barrel of an injection molding machine with a hopper end at a temperature of 30-50 °C, a middle part at 120-160 °C, and a front part at 160-200 °C (col. 13, ll. 31-37).

Column 14, lines 5-12, disclose that an Example 2 composition is extrusion molded under the conditions of Example 1. This composition includes hydroxyethylated starch (Table 3, col. 13, ll. 56) and is obtained by the extrusion molding conditions of Example 1 (col. 14, ll. 5-7).

V. ANALYSIS

The Examiner offers no evidence in support of the finding that "gelatinization occurs about 150C-175C." (Ans. 3.) Nor does the Examiner offer any evidence in support of the finding that "it is known that gelatinization temperatures of starches such as are used in Nakatsuka range from 150C-175C and that gelatinization temperatures of starches in general range from about 70C-200C." (Ans. 9.) Moreover, it is unclear what starches the Examiner is referring to as "starches such as are used in Nakatsuka."

According to the Examiner, column 13, lines 33-37 of Nakatsuka describes an extruder having varying temperature zones, i.e., a first zone at 30-50 °C and a second zone at 120-200 °C such that the first zone does not allow gelatinization but the second zone allows gelatinization (Ans. 9). Column 13, lines 33-37, describes injection molding a composition including high-amylose corn starch and sodium caseinate protein (*see* col. 12, ll. 14-18). We agree with Appellants that the Examiner has offered no reasoning, nor pointed to any evidence of record, indicating that the starch-protein composition of Nakatsuka's Example 1 undergoes gelatinization.

In order to establish that gelatinization inherently occurs as claimed within the injection molding machine barrel of Nakatsuka's Example 1 process, the Examiner must provide sufficient evidence and technical reasoning to establish that gelatinization would not occur in the 30-50 °C range of the first zone of Nakatsuka's injection molding machine barrel, but would occur in a later 120-200° C zone(s). The Examiner has not provided the required evidence in support of a finding of inherency.

We further note that the extruding step of claim 1 is a step of extruding "said starch." Said starch must be read as referring to the hydroxyalkyl starch recited in the providing step of the claim; that is the only "starch" referred to in the claim. The Examiner has not established that the composition processed in Example 1, the Example containing the column 13 disclosure relied upon, contains hydroxyalkyl starch. There can be no gelatinization of hydroxyalkyl starch if that component is not contained in the composition.

The composition processed in Example 2 contains hydroxyalkyl starch, but the Example 2 composition is processed according to the extrusion molding process disclosed at column 12, lines 39-59 of Nakatsuka, not the injection molding process of column 13, lines 31-37. Nakatsuka only discloses one temperature zone for the barrel of that extrusion molding apparatus (Nakatsuka, col. 12, ll. 43-44). The Examiner has not established that the extrusion barrel used to mold the Example 2 composition has different barrel conditions such that the gelatinization level is not reached in the first zone, but is reached in the second zone as claimed.

Moreover, in both Examples 1 and 2, the composition is milled at 120 °C before molding (Nakatsuka, col. 12, ll. 20-35). Assuming the Examiner is correct that "gelatinization temperatures of starches in general range from about 70C to 200C" (Ans. 9), it is possible that gelatinization may occur in the milling step. It is not clear whether the Examiner considered the effects of the milling step in the determination of inherency.

The rejection of claim 33 fails for the same reason as the rejection of claim 1.

Furthermore, claim 33 further requires mixing the extruded starch product with water and seasoning to form a seasoning adherence solution and further requires a step of applying the seasoning adherence solution to cause seasoning in the solution to adhere to a food substrate.

The Examiner relies upon the disclosures in column 11 of Nakatsuka as teaching what is required by claim 33 (Ans. 5 and 9-10).

According to Nakatsuka at column 11, one can use the extruded film to form packages containing dry granulates or powders such as seasonings (col. 11, ll. 6-14). The packages can be introduced into cold or hot water without being unwrapped (col. 11, ll. 14-18). The film disintegrates and releases the seasonings into the water (col. 11, ll. 24-26). The film can also be used to wrap baking additives, and can be integrated to the baked product (col. 11, ll. 32-36 and 43-47).

This portion of Nakatsuka, as pointed out by Appellants, does not disclose forming a solution from the shaped article, incorporating seasoning into the solution, and coating a food substrate with the seasoning solution as claimed (Br. 10). The Examiner has not explained how the packaging and wrapping disclosures of Nakatsuka provide a suggestion for doing what is required by claim 33.

Appellants have established that the Examiner reversibly erred in rejecting claim 33 for this additional reason.

Redding and Altieri are relied upon for other limitations of the claims. These references as relied upon by the Examiner do not remedy the above discussed deficiencies in the rejection.

With respect to claim 7, the Examiner relied upon Nakatsuka as discussed above, and Protzman, as applied by the Examiner, does not remedy the deficiencies of the rejection.

VI. CONCLUSION

We do not sustain the rejection of claims 1-6 and 33-43 under 35 U.S.C. § 103(a) over Nakatsuka, Redding and Altieri. Nor do we sustain the rejection of claim 7 over those references further in view of Protzman.

VII. DECISION

The decision of the Examiner is reversed.

REVERSED

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